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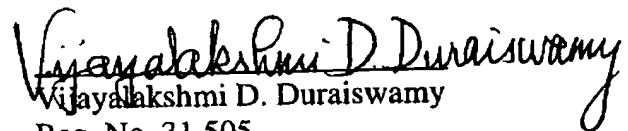
26. (New) A method as recited in claim 25 further comprising the step of monitoring a number of users of a code in the code bin;

wherein the step of assigning a non-interfering code to said first user comprises assigning a non-interfering code corresponding to one of the plurality of code bins having a least number of users.

REMARKS

Certain typographical and/or grammatical errors in the specification have been herein corrected and new (additional) claims fully supported by the original specification are presented for examination. Should there be any questions regarding this matter, please contact the undersigned at the below-listed number.

Respectfully submitted,


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VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE SPECIFICATION:**

Paragraph beginning at line 10 of page 5 has been amended as follows:

High altitude communications device 16 may, for example, be a low earth orbit satellite (LEO), middle earth orbit (MEO) satellite or a geostationary orbit (GEO) satellite. Also, communications device 16 may also comprise a stratosphere-based platform. A stratospheric platform is preferably an unmanned vehicle that can fly for several months at an altitude of about 60,000 feet above the earth in small circles. The stratospheric platform 16 has numerous advantages including that capacity can be concentrated over a populated area, transmission delays associated with geostationary satellites are significantly reduced, the power for transmitting and receiving is substantially smaller than satellites, and the elevation[s] angles of the system are high. The stratospheric platforms may also deploy relatively rapidly compared to satellites and thus, if the need increases, the system capability may be increased or modified. If the device is a stratospheric platform, the device operation center 22 may control the platform to fly in a small radius flight path over a given spot on the earth. Device operations center 22 may also provide replacement of parts and platforms for system 10.

Paragraph beginning at line 6 of page 7 has been amended as follows:

Referring now to Figure 3, a method 36 for operating the present invention according to a [co-division] code division multiple access system is illustrated. As illustrated for simplicity, four code bins 38A-38D are illustrated. The various numbers of users in the system in each code bin are illustrated as well. For example, in bin 38A, 8 users are present, in bin 38B, 10 users are present, in bin 38C, 25 users are present, and in bin 38D, 40 users are present.

When a new user comes into the system in step 40, step 42 checks to determine whether there are any empty code bins. If there are empty code bins in step 42, the new user is assigned a code within the empty bin in step 44. In step 46, the code bins are sorted with the number of users in ascending order as illustrated by bins 38A-38D.

Paragraph beginning at line 13 of page 8 (i.e. third paragraph) has been amended as follows:

Thus, in the present invention, the user is assigned a code and the beam moves with the user until the user interferes with another user with the same code. [Thus] Then, another code is assigned to the beam corresponding with the user.

Lines 1-19 of page 9 (the first occurrence) have been deleted as follows:

[Referring now to Figure 5, a plurality of users 64 having corresponding beam 65 is illustrated in a non-interfering manner. Figure 5 thus illustrates a second color.

Referring now to Figure 6, a third set of users 66 is illustrated with corresponding beams 67. Thus, Figure 6 illustrates a third color of a multi-color system.

Figure 7 illustrates a system illustrating the combination of the various users over the service area 12. Figure 7 is merely illustrative of a potential snapshot of the present invention. Because the system is designed for mobile users, the various positions of the users changes over time.

Advantageously, the present invention provides a system that allows the user to maintain a code assignment until the code assignment interferes with another user. Thus, the controller 28 on the high altitude communications device 16 may be reduced in size and complexity. This type of configuration is particularly suitable for high altitude communications devices such as satellites or stratospheric platforms. Also, only four code assignments have been illustrated. However, those skilled in the art will recognize more or a greater number of code assignments may be used. Thus, no predefined cells are present in the present invention.]

IN THE CLAIMS:

2. (Amended) A communications system comprising:

a first mobile user device;

a second user device; and,

a high altitude communications device in communication with [a] the first mobile user device [in] and the second user device, the high altitude communications device [assigned] assigning a first beam having a first code to the first mobile user and [assigns] assigning a second beam having the first code to the second user, said device continually determining whether an interference occurs between the first beam and the second beam and, when an interference occurs, reassigning a second code to the first beam.

6. (Amended) A system as recited in claim [2] 5 wherein said satellite is selected from the group consisting of a medium earth orbit satellite, a low earth orbit satellite, and a geostationary satellite.

9. (Amended) A system as recited in claim 8 wherein said gateway station couples said first mobile user device and said second user device [users] to terrestrial networks through the high altitude communications device.

10. (Amended) A method of operating a communications system comprising the steps of:

introducing a first user into the system;

establishing a plurality of code bins;

when an empty code bin exists, assigning the first user to an empty code bin;

when no empty code [bins] bin exists, determining whether the first user may be assigned to a first one of the plurality of code bins by performing an interference check;

when the interference check is not passed, determining a second one of the plurality of code bins;

performing an interference check with the second of the plurality of code bins; and,

when an interference of the second code bin is not found, assigning the first user [the] a second code associated with the second bin.

11. (New) A method as recited in claim 10 further comprising introducing subsequent users into the system;

performing an interference check for each of the subsequent users;

assigning a non-interference code to each of the subsequent users.

12. (New) A method as recited in claim 10 further comprising continually determining whether an interference occurs between the first user and subsequent users, when an interference occurs assigning a non-interfering code thereto.

13. (New) A method as recited in claim 10 wherein introducing a first user into the system comprises introducing the first user into the system comprising an automotive communication system.

14. (New) A method as recited in claim 10 wherein introducing a first user into the system comprises introducing the first user into the system comprising a personal digital assistant communication system.

15. (New) A method as recited in claim 10 wherein introducing a first user into the system comprises introducing the first user into the system comprising a cellular phone communication system.

16. (New) A method as recited in claim 10 wherein introducing a first user into the system comprises introducing the first user into the system comprising a business-based communication system.

17. (New) A method as recited in claim 10 wherein introducing a first user into the system comprises introducing the first user into the system comprising a home-based communication system.

18. (New) A method as recited in claim 1 further comprising the step of monitoring a number of users of a code in each of the plurality of code bins;

wherein the step of assigning the first user a second code comprises assigning a second code to the first user corresponding to a second code bin having a least number of users.

19. (New) A system as recited in claim 2 wherein said communication system comprises a personal digital assistant communication system.

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20. (New) A system as recited in claim 2 wherein said communication system comprises a cellular phone communication system.

21. (New) A system as recited in claim 2 wherein said communication system comprises a business-based communication system.

22. (New) A system as recited in claim 2 wherein said communication system comprises a home-based communication system.

23. (New) A method for code management system comprising:
assigning a plurality of users a plurality non-interfering code;
moving the plurality of users;
continually monitoring the plurality of users for an interference; and
when a first user of the plurality of users interferes with another of said plurality of users, assigning a non-interfering code to said first user.

24. (New) A method as recited in claim 23 wherein assigning a non-interfering code to said first user, comprises assigning a non-interfering code to said first user from a plurality of code bins.

25. (New) A method for code management comprising:
establishing a plurality of code bins having a respective plurality of codes;
assigning each of said plurality of users to one of the plurality of codes so that each of said plurality of users does not have an interfering code with an adjacent user;
moving the plurality of users;
continually monitoring the plurality of users for an interference;
when one of the plurality of users interferes with another of said plurality of users, assigning a non-interfering code to said first user.

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26. (New) A method as recited in claim 25 further comprising the step of monitoring a number of users of a code in the code bin;

wherein the step of assigning a non-interfering code to said first user comprises assigning a non-interfering code corresponding to one of the plurality of code bins having a least number of users.